

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF NEW YORK**

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NUANCE COMMUNICATIONS, INC.,	:	x
	:	
Plaintiff,	:	
	:	
v.	:	NO. 16-CV-5173 (ECR)
INTERNATIONAL BUSINESS MACHINES	:	
CORPORATION	:	
	:	
Defendant.	:	
	:	
	x	

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**POST-TRIAL MEMORANDUM OF PLAINTIFF NUANCE COMMUNICATIONS, INC.**

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## **PRELIMINARY STATEMENT**

This is a case about seller's remorse and resulting bad faith actions. After eagerly accepting \$25 million from Nuance in September 2010 for a license to the early stage question and answer technology DeepQA – and all modifications, updates, upgrades, and other changes to that technology for a period of ten years ("Updates") – IBM intentionally deprived Nuance of the benefit of its bargain. Such egregious conduct should not stand and IBM should be ordered to, among other remedies, finally comply with its contract and provide all Updates to Nuance.

In order to entice Nuance to enter into the software license agreement ("SLA"), IBM promised repeatedly that it would devote significant resources to DeepQA to further develop it to be used in domains outside of *Jeopardy!*. IBM further promised there would be a single, universal core code base with all Updates, including new functionality and new code, added to it and provided to Nuance. Given the nascent nature of DeepQA, Nuance insisted on 10 years of Updates from all of IBM. Nuance was not interested in paying IBM \$25 million to play *Jeopardy!*; rather, Nuance wanted to get in on the ground floor of DeepQA and, per IBM's representations, benefit from IBM's future development of the technology outside of *Jeopardy!*.

The SLA's plain language and the relevant extrinsic evidence,<sup>1</sup> including IBM's pre-SLA representations and failed amendment, make clear that Nuance bargained for DeepQA Updates from all of IBM.<sup>2</sup> However, after the *Jeopardy!* win, IBM decided it undervalued the asset and

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<sup>1</sup> This Court held that the Licensed IBM Background Software provision is ambiguous, allowing for the review of extrinsic evidence. *See Nuance Commc'ns, Inc. v. Int'l Bus. Machines Corp.*, No 16-CV-5173 (KMK), 2019 WL 2006180, at \*11 (S.D.N.Y. May 7, 2019).

<sup>2</sup> The IBM versus IBM Research issue was exposed during trial as a made-up argument by IBM. IBM owns DeepQA as well as the Research and Software Groups, which are just business units within IBM, John Kelly admitted he was an officer of IBM who could license any intellectual property in the company, and the IBM Operations Committee approved the license as written. IBM's internal politics cannot change its legal obligations. *See* Nuance's Supplemental Proposed Findings of Fact and Conclusions of Law ("FOF") ¶¶ 93-95, 102-105.

unilaterally rewrote the SLA to limit Updates to just IBM Research. Then, IBM took active and covert steps to renege on its deal with Nuance and ensure that all meaningful improvements to DeepQA and its functionality occurred outside of IBM Research and were withheld from Nuance.

First, IBM “forked” the DeepQA code, providing the IBM Software Group with a copy of DeepQA for IBM Software to further develop and improve. Then, IBM pillaged IBM Research personnel working on DeepQA and moved the most knowledgeable members to work on DeepQA outside of Research in other IBM divisions. Those working on DeepQA, including the transferred employees, were then “firewalled” off from IBM Research. IBM’s witnesses admitted this was done *solely* to deprive Nuance of DeepQA Updates. As IBM’s Michael Rhodin stated in an internal IBM email, because Nuance rejected IBM’s proposed SLA Amendment, IBM “shut down watson research to bare minimum . . . focus[ed] the research on areas that would not further any commercialization by Nuance of our [DeepQA] technology, and d[id] all future work in SWG out of reach of [Nuance’s] contract.” JX019. IBM’s bad faith even extended into IBM Research as IBM also withheld certain IBM Research-created DeepQA Updates under the guise that they were unrelated to *Jeopardy!*. Further, IBM developed improvements to DeepQA’s question answer technology outside of the “core” and withheld them from Nuance.

Because of IBM’s multiple SLA breaches, Nuance has seen no return on its \$25 million investment, while IBM has developed an entire suite of Watson offerings built from the very Updates IBM promised to, but withheld from, Nuance. Nuance therefore seeks an Order requiring IBM to provide all Updates to DeepQA and its functionality to Nuance, including the DomainIndependent\_comp component, the blue-washed DeepQA code, Watson Discovery Advisor, Watson Engagement Advisor, Watson for Oncology, Natural Language Classifier, Document Conversion, Watson Discovery Service, Natural Language Understanding, Retrieve

and Rank, Tone Analyzer, Watson Explorer, and Watson Knowledge Studio. Nuance also seeks an Order imposing a Special Master to ensure all Updates are provided to Nuance, and extending IBM’s obligation to deliver all DeepQA Updates through September 30, 2030. *See New York Real Estate Inst., Inc. v. Edelman*, 42 A.D.3d 321, 321-22 (1st Dep’t 2007) (extending time to perform material obligation under contract for length of time offending party was in violation of contract).

### **THE FACTUAL RECORD**

#### **I. IBM’s DeepQA Promises and Representations to Nuance and the Resulting SLA**

On June 3, 2010, IBM showcased its latest healthcare technology innovations for Nuance. FOF ¶ 9. IBM’s “desired outcome” of the meeting was for Nuance to partner with IBM and make it Nuance’s “lead dog” in “go to market.” *Id.* at ¶¶ 10-12. During the meeting, IBM presented DeepQA, a cutting-edge question and answer software system that IBM was training to compete on *Jeopardy!*. *Id.* at ¶¶ 13-14. IBM’s presentation focused not on DeepQA’s ability to compete on *Jeopardy!*, but on IBM’s “vision of where DeepQA could be applied to the medical space.” *Id.* at ¶ 16. The DeepQA presentation also included the “key message” that IBM was going to “pour tons of money into being innovative in th[e] [healthcare] space.” *Id.* at ¶ 15. IBM’s presentation piqued Nuance’s interest and led to subsequent discussions between the parties. *Id.* at ¶ 17.

Over the next few months, IBM continued to pitch DeepQA to Nuance. *Id.* IBM described its plan to evolve the DeepQA architecture into something beyond just *Jeopardy!* and into the healthcare, electronics, financial services, mobile, retail and transportation spaces. *Id.* at ¶¶ 17, 30. Importantly, IBM repeatedly stressed to Nuance its long-term vision of DeepQA as a “common architecture and platform for intelligent [question and answer] systems,” with “an extensible general purpose capability,” and promised “[e]xtreme [c]ollaboration” throughout IBM to carry out that vision.” *Id.* at ¶¶ 31-32. IBM explained to Nuance that this meant all of the work IBM did to improve the DeepQA platform would flow back into a universal core codebase that

would then be provided to Nuance. *Id.* at ¶¶ 32-33. In September 2010, IBM’s Kevin Reardon approached Nuance’s CEO Paul Ricci to discuss business opportunities before the end of IBM’s third quarter in order to prevent a shortfall in IBM’s revenue commitments. *Id.* at ¶¶ 19, 21. Mr. Ricci was only interested in a deal if it was “genuinely strategic” for Nuance, and Mr. Reardon suggested DeepQA. *Id.* at ¶ 23. Though Nuance was interested in the technology, it understood the significant work that IBM needed to perform on the code in order to make it commercially viable. *Id.* at ¶ 29. Therefore, Mr. Ricci convened a team to evaluate the potential investment and whether Nuance could, over time, leverage DeepQA in non-*Jeopardy!* use cases. *Id.* at ¶¶ 24, 26.

Nuance’s evaluation of DeepQA centered around what came after *Jeopardy!*: specifically, DeepQA’s applicability to other domains and IBM’s commitment to invest in and develop the technology. *Id.* at ¶¶ 35-40. IBM understood Nuance’s focus on healthcare and that Nuance did not want to just play *Jeopardy!*. *Id.* at ¶¶ 27, 36-37. During the diligence, IBM addressed “next steps” for DeepQA, including “how to impact real-world Business Applications with DeepQA technology.” *Id.* at ¶¶ 27-28, 30-31, 41-50. The parties also discussed the DeepQA core team composition and the importance of IBM’s engineers working collaboratively on DeepQA. *Id.* at ¶¶ 32, 34, 42. IBM acknowledged DeepQA’s limitations, but stressed the significant investment IBM would make and the “extreme collaboration” by IBM divisions to improve the DeepQA code and its functionality, and that such improvements would flow into the core codebase, and also to Nuance by virtue of the SLA. *Id.* at ¶¶ 47-52. IBM also repeatedly represented to Nuance that DeepQA could be applied to healthcare. *Id.* at ¶ 50. Nuance would not have agreed to license DeepQA without IBM’s representations about its planned investment in the code, the promise that DeepQA could be adapted outside of *Jeopardy!*, and the promise that Nuance would receive the benefit of future improvements to DeepQA and its functionality. *Id.* at ¶ 54.

Given IBM's representations about the future of IBM's work on DeepQA, when IBM's first draft of the proposed license did not include Updates, Nuance rejected it as a non-starter. *Id.* at ¶¶ 55-58. Nuance immediately insisted that IBM provide Updates, demanding the same Updates provision as in a prior agreement where Nuance was entitled to Updates from all of IBM. *Id.* at ¶¶ 59-61. Nuance explicitly told IBM that it required Updates from *all* of IBM and not just IBM Research. *Id.* at ¶ 62. Nuance's need for Updates from all of IBM stemmed from the understanding that IBM was likely to move DeepQA to other divisions and, as DeepQA was several years away from commercialization, Nuance wanted to make sure it had access to everything IBM was doing. *Id.* at ¶¶ 57, 63-64. In the course of negotiations, Nuance also explicitly told IBM that the Updates language needed to be "sufficiently robust" to cover "new components and code" and the parties understood Nuance would receive Updates to DeepQA's functionality. *Id.* at ¶¶ 65-66, 109-115. IBM acceded to Nuance's demands. *Id.* at ¶¶ 67-73. Nuance would not have entered into the SLA without a provision guaranteeing Nuance all Updates made by IBM to DeepQA and its functionality, including new components and code. *Id.* at ¶ 79.

On September 29, 2010—the day before the parties signed the SLA—IBM's John Kelly and Kevin Reardon flew to Nuance to personally meet with Paul Ricci and make a final push for the deal. *Id.* at ¶ 80. Although Dr. Kelly's selective memory did not include this meeting,<sup>3</sup> contemporaneous documents confirmed that he and Mr. Reardon were emphatic about IBM's commitment to and long-term investment in DeepQA and the opportunities IBM's investment would create for Nuance through the promised Updates. *Id.* at ¶¶ 81-86. Based on IBM's

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<sup>3</sup> During trial, Dr. Kelly conveniently claimed to recall a dinner meeting where he allegedly told Paul Ricci about what IBM was doing with absolutely no documents to support him, yet could not recall any details of meetings like this one which were unhelpful to IBM and where there were contemporaneous documents about them. *See* FOF ¶ 351.

promises, Nuance not only entered into the SLA, it also agreed to increase its payment to IBM from \$20 million to \$25 million. *Id.* at ¶¶ 87-89.

Per the SLA, IBM agreed to deliver the Licensed IBM Background Software, defined as:

“Licensed IBM Background Software” means (a) all Software that exists as of the Effective Date in all available formats (including Source Code and Object Code) that is owned by, or that has been developed or licensed by the IBM Research Group, including Tools, and that is listed on Exhibit A, *including any modifications, updates, upgrades, error corrections, bug fixes, diagnostic and/or testing tools, that are JDBC compliant, and other changes*, if available (“Modifications”), and if such Modifications are not contractually prohibited under a Third Party agreement, and such Modifications are available, will be timely provided to Nuance; and where the Modifications continue to meet the scope contemplated in Article 2.1 regarding the licensing of Deep QA under this Agreement, *as of the Effective Date and thereafter for a period of ten (10) years, and additional Software as agreed by the parties, provided to Nuance by IBM under the Agreement (collectively “Updates”)*; and (b) all Software Materials for such Software.

JX001 at JX001.253-54 (emphasis added) (the “Updates Provision”). The SLA clearly defines “IBM” as “IBM Corporation.” *Id.* at JX001.19. The Updates Provision is not expressly limited to a division or group of IBM Corporation. FOF ¶ 100. The use of “IBM,” not “IBM Research” was a specific and intentional choice by the parties as Nuance insisted upon this language because Nuance did not want its access cut off if IBM moved DeepQA out of IBM Research (as it ultimately did). *Id.* at ¶ 101.

## II. **Post-*Jeopardy!* IBM Forks the DeepQA Source Code and Erects a One-Way Firewall to Withhold DeepQA Updates from Nuance**

Despite IBM’s clear contractual obligation to provide all DeepQA Updates, IBM instead undertook elaborate efforts to withhold Updates from Nuance. *Id.* at ¶¶ 117-199. In September 2010, IBM Research exclusively developed DeepQA. *Id.* at ¶ 117. However, immediately after the *Jeopardy!* airing, IBM realized the potential commercial value of DeepQA and “forked” the code, delivering a copy of the code to the IBM Software Group for further development. *Id.* at ¶¶ 121-124. Then, in August 2011, IBM proposed an SLA amendment (the “Proposed Amendment”)

to replace the definition of “Licensed IBM Background Software” with one that would drastically limit IBM’s obligations to deliver Updates to only those from IBM Research. JX017. Michael Rhodin, one of IBM’s Senior Vice Presidents, threatened internally that, if Nuance rejected the Proposed Amendment, IBM would “shut down watson research to bare minimum . . . and focus the research on areas that would not further any commercialization by Nuance of our [DeepQA] technology, and do all future work in SWG out of reach of [Nuance’s] contract.” JX019.

When Nuance rejected the Proposed Amendment, IBM made good on its threat. FOF ¶¶ 175-176. Forking the DeepQA code meant that, rather a single core code base, as promised to Nuance, there were multiple copies of DeepQA source code being developed by different IBM groups. *Id.* at ¶ 126. Ultimately, IBM Research was left with its preexisting DeepQA code, in which IBM invested few resources, while IBM poured money and top talent into developing DeepQA in other IBM groups. *Id.* at ¶¶ 127-129. IBM also transferred DeepQA engineers out of IBM Research and into IBM Software Group and IBM Watson Group to help accelerate DeepQA’s development. *Id.* at ¶¶ 159-162. IBM then implemented a one-sided “firewall,” which prevented IBM Research from accessing IBM Software Group’s—or any other division of IBM’s—work on the DeepQA code, but allowed IBM Software Group to be trained by IBM Research and utilize IBM Research’s work on DeepQA. *Id.* at ¶¶ 143-145, 148-150, 163-164. In contrast to the extensive work by IBM Software and IBM Watson Group on DeepQA, IBM Research made only limited DeepQA Updates. *Id.* at ¶¶ 128, 338.

IBM admits the forking and firewall were imposed explicitly to keep DeepQA Updates from Nuance, conceding “[t]he reason for the firewall was to avoid giving Nuance a basis to claim that code developed by [Software Group] as part of its commercialization of DeepQA fell within the scope of the license granted to Nuance in the SLA.” Declaration of David McQueeney ¶ 10;

FOF ¶¶ 143-147, 164. IBM also admitted it “never implemented [the] idea of a common code base because it didn’t want to share the work with Nuance.” Trial Tr. at 723:22-724:5 (Eric Brown testimony). Based on IBM’s unilateral reconstruction of the SLA, IBM decided that so long as DeepQA Updates did not go to IBM Research, and current IBM Research employees (as opposed to transferred ones) did not work on the code, then IBM would not need to provide Nuance with Updates. *Id.* at ¶¶ 144-145. This was the first time IBM had enacted such a firewall. *Id.* at ¶ 152. Despite the firewall going against IBM’s normal practice and hindering DeepQA development, IBM strictly enforced it and kept IBM’s work on DeepQA from IBM Research. *Id.* at ¶¶ 151-157.

### **III. IBM Breaches the SLA By Creating Updates and Improvements to DeepQA and Its Functionality And Withholding them From Nuance**

The result of IBM’s elaborate scheme was that IBM’s Software Group and Watson Group substantially improved and updated DeepQA and its functionality. *Id.* at ¶¶ 224-326. Other than limited productization improvements, these Updates were not provided to Nuance. *Id.* at ¶ 139.

Immediately after “forking” the code, IBM Software Group made numerous improvements to DeepQA to make it commercially viable, a process called “blue-washing.” *Id.* at ¶ 130. These domain independent changes made DeepQA smaller, faster, more efficient, easier to install and maintain, less fragile, more reliable, and gave DeepQA greater flexibility. *Id.* at ¶¶ 133-134. IBM Software also fixed bugs, removed dead code, added in API’s, and built new user interfaces. *Id.* at ¶¶ 134-137. These changes were all beneficial to the DeepQA code, “necessary” to turn DeepQA into a commercial product, and allowed it to work outside of *Jeopardy!*. *Id.* at ¶¶ 133-137. Yet, IBM never provided this blue-washed code to Nuance. *Id.* at ¶ 139. IBM then created products from this “blue-washed” DeepQA code and continued to update the code in these products, yet again failed to provide them to Nuance. *Id.* at ¶¶ 138-139, 224-225, 228-229.

Among these products are Watson Engagement Advisor, Watson Discovery Advisor,

Watson for Oncology and Natural Language Classifier, which have remarkable similarity and substantial source code overlap with the IBM Research version of DeepQA. *Id.* at ¶¶ 138, 224-282. IBM's witnesses testified, and IBM's own documents also indicate, that these products were developed from and utilize DeepQA. *Id.* at ¶¶ 224-225, 232-233, 246-248, 263, 270, 276, 281; PX001 at PX001.060-074 ("Although the original DeepQA architecture and technologies have evolved and modernized, the 'fingerprints' can be found throughout the Watson Developer Cloud."). These products contain thousands, sometimes hundreds of thousands, of source code files in common with DeepQA. FOF ¶¶ 226, 236, 249-251. Even the programming notes for these products reflect the same authors and make references to the code being based on or improving the IBM Research DeepQA code. *Id.* at ¶¶ 235-240, 253-255. In sum, these products are developed from and contain Updates to DeepQA. *Id.* at ¶¶ 243, 256, 276, 282. Without their use of DeepQA, none of these products would function. *Id.* at ¶¶ 225, 272. None of these products or the Updates contained within them were provided to Nuance. *Id.* at ¶ 229.

IBM also improved upon the question answering technology behind DeepQA, albeit outside of the DeepQA "core," *id.* at ¶¶ 283-326, and withheld all of those Updates from Nuance, even though the parties agreed Nuance was entitled to these improvements under the SLA. *See* Tr. at 682:3-682:11 (Eric Brown testimony) (admitting Nuance was entitled to new files or sets of files that performed the functionality of DeepQA better); PX019 (Jeanne McCann email to IBM ensuring that Updates include new components or modules to core system); FOF ¶¶ 109-115.

As discussed during the trial, DeepQA's architecture includes a Question Analysis component, a Primary Search component, a Hypothesis Generation component, a Hypothesis and Evidence Scoring component and a Final Merging and Ranking component. *Id.* at ¶¶ 7, 111, 290.

IBM developed new APIs,<sup>4</sup> Document Conversion, Watson Discovery Service, Natural Language Understanding, Retrieve and Rank, Tone Analyzer, Watson Explorer and Watson Knowledge Studio,<sup>5</sup> that improved upon DeepQA's architecture and functionality, but did not provide those APIs to Nuance. FOF ¶¶ 283-326.

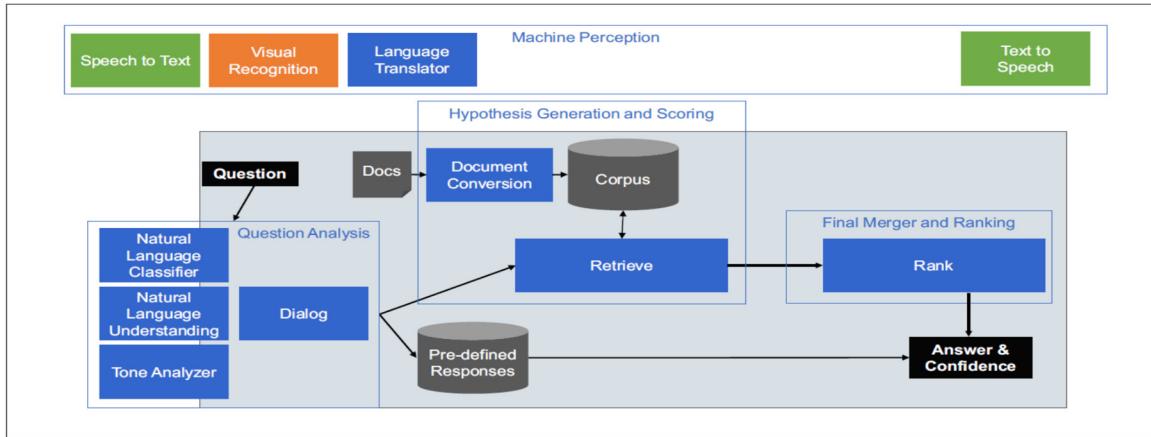


Figure 4-24 DeepQA pipeline; evolution to Watson Developer Cloud: Watson services overview

As shown by the above Figure from IBM's Redbook (PX001) and the trial testimony, Natural Language Classifier, Natural Language Understanding and Tone Analyzer improve upon DeepQA's Question Analysis component. *Id.* at ¶¶ 281, 295-298, 299-302. Document Conversion improves upon the Hypothesis Generation and Scoring component by inputting and breaking down data into smaller pieces that are then returned as answers. *Id.* at ¶¶ 303-306. Retrieve and Rank improves upon the Hypothesis Generation and Scoring and Final Merger and Ranking components of DeepQA as it combines these elements into a single API pull and allows customization of the DeepQA pipeline to a specific use case. *Id.* at ¶¶ 307-311. Watson Discovery Service is a combination of Document Conversion and Retrieve and Rank and now replaces those APIs. *Id.* at ¶ 313. Watson Explorer returns documents in response to a user's natural language query. *Id.*

<sup>4</sup> An API is software that allows a user to get access to the function or service that the API represents. July 28 Trial Tr. 122:18-23 (Rob High testimony).

<sup>5</sup> Given IBM's refusal to produce source code control system metadata and redlines for these APIs, Nuance's expert was unable to determine whether source code overlap exists for those APIs. *Id.* at ¶ 284.

at ¶ 317. Lastly, Watson Knowledge Studio allows users to build AI models in specific domains by annotating documents and data, which would allow DeepQA to become a subject matter expert.

*Id.* at ¶ 322. IBM's expert agreed these APIs would all be useful in conjunction with DeepQA.

*Id.* at ¶ 293. None of these APIs were provided to Nuance. *Id.* at ¶ 294.

Finally, IBM even withheld Updates developed *within* IBM Research if they *believed* those Updates did not extend the *Jeopardy!* version of DeepQA. *Id.* at ¶ 177. In March 2012, IBM split the IBM Research DeepQA source code a second time, forming two different source tree components: DomainIndependent\_SLA\_comp (“SLAC”) and DomainIndependent\_comp (“NONSLAC”). *Id.* at ¶ 179. Though both components contained domain independent code developed by IBM Research, IBM cherry-picked what it would include in the SLAC version that was delivered to Nuance, often moving code between the components. *Id.* at ¶¶ 180-199. Nuance's expert's review of the SLAC component metadata revealed that the NONSLAC component contained DeepQA Updates that were never delivered to Nuance. *Id.* at ¶¶ 189-199.

#### **IV. IBM Kept Its Breach of the SLA From Nuance**

Despite IBM's active efforts to keep meaningful Updates from Nuance, when questioned about the status of DeepQA, IBM repeatedly assured Nuance that it was working on the code, but things take time, and IBM had and would deliver all Updates. *Id.* at ¶¶ 200-211. Prior to 2015, no one at IBM ever told anyone at Nuance that IBM was withholding DeepQA Updates, and Nuance had no way of uncovering such information on its own. *Id.* at ¶¶ 141-142, 166, 212-213. Industry feedback of IBM's difficulty advancing DeepQA outside of *Jeopardy!* also led Nuance to believe it had all DeepQA Updates. *Id.* at ¶¶ 214-215. Further, starting in January 2013, IBM's use of Watson as a broad descriptor in the marketplace prevented Nuance from ascertaining what, if any, Watson products had a DeepQA correlation. *Id.* at ¶ 216. Moreover, there was no reason to suspect that IBM would not ultimately deliver the work given that the Updates Provision did

not require delivery within a set period of time. *Id.* at ¶ 218. Nuance had also been told to expect some delays with delivery as IBM had to first test the Updates. *Id.* at ¶ 217. It was only in 2015 that IBM's Bill LaFontaine first informed Nuance's Jeanne McCann that IBM's Watson team was not using the IBM Research code and instead had new DeepQA code that it was not providing to Nuance. *Id.* at ¶¶ 219-221. Accordingly, Nuance filed suit on June 30, 2016. *Id.* at ¶ 223.

## ARGUMENT

### I. Legal Standards

Under New York law, the elements of a breach of contract claim are: "the existence of a contract, the plaintiff's performance under the contract, the defendant's . . . breach, and resulting damages." *Hampshire Props. v. BTA Bldg. & Developing, Inc.*, 122 A.D.3d 573, 573 (2d Dep't 2014). A party breaches a contract when it acts in bad faith. Trial Tr. at 278:6-24; *see also Fischhoff v. Coty, Inc.*, 634 F.3d 647, 653 (2d Cir. 2011) ("A breach of the duty of good faith and fair dealing is considered a breach of contract."). If a term is ambiguous, the court may "consider[] extrinsic evidence submitted by the parties to assist in determining their actual intent." *Nuance Commc'ns*, 2019 WL 2006180, at \*9. "Extrinsic evidence may include the acts and circumstances surrounding execution of the ambiguous term, conversations, negotiations[,] and agreements made prior to or contemporaneous with the execution of a written agreement, and the parties' course of conduct throughout the life of the contract." *Id.* (citing *GE Funding Cap. Mkt. Servs., Inc. v. Neb. Inv. Fin. Auth.*, No. 15-CV-1069, 2017 WL 2880555, at \*4 (S.D.N.Y. July 6, 2017)) (alterations in original).

Where a party fails to perform a material obligation under a contract, courts may extend performance for the length of time that the offending party was in violation of the contract. *See Edelman*, 42 A.D.3d at 322. Included in the Court's inherent authority is the ability to appoint a special master to address post-trial matters including to ensure full relief under the judgment, particularly where there is reason to suspect a party may not be forthcoming. *See* Fed. R. Civ. P.

53; *United States v. Yonkers Bd. of Educ.*, 29 F.3d 40, 44 (2d. Cir. 1994) (per curiam) (upholding special master where ““system which relies on consensus and mediation’ has proven unreliable”).

## II. Nuance is Entitled to Updates From All of IBM Including New Code

The Updates Provision plainly states that Updates are “provided to Nuance **by IBM**” and the SLA clearly defines IBM as “IBM Corporation.” JX001 at JX001.19, JX001.253-54. Even IBM’s negotiating attorney concedes that the plain language of the SLA does not limit Updates to IBM Research. Ellen Cox. Dep. at 149:13-19. Moreover, other provisions in the SLA further reflect the parties’ intention that IBM, not IBM Research, was obligated to deliver Updates to Nuance. For example, Section 2.4 of the SLA states that “[i]f **IBM** provides . . . any modifications, updates, upgrades, error corrections . . . **IBM** will update Exhibit B [to the SLA].” JX001 at JX001.3. If Updates were limited just to those provided by IBM Research, there would be no need to refer to all of IBM in this clause since IBM would not be providing anything that could require updates to Exhibit B. Section 2.4 also mirrors the language used in the Updates Provision, which further supports Nuance’s reading of the SLA as requiring Updates from all of IBM. In addition, the extrinsic evidence, including IBM’s pre-SLA representations, the parties’ negotiation of the Updates Provision, and IBM’s Proposed Amendment, demonstrates the parties’ intent to give Nuance a license to all DeepQA Updates developed by IBM, including new components and code.

*First*, prior to executing the SLA, IBM repeatedly presented DeepQA to Nuance as having numerous potential future applications outside of *Jeopardy!*, including in healthcare. *See supra* 3-6. As recounted by Paul Ricci in a contemporaneous document from September 12, 2010, “John Kelly, [IBM’s] head of research brought up . . . the application of this [DeepQA] technology to the medical field.” PX007 at PX007.002-3. Dr. Kelly made a similar statement to *New York Times* in June, 2010, stating “I want to create a medical version of this . . . A Watson M.D., if you will.” *Id.* at PX007.076. Though Dr. Kelly tried to walk back this statement at trial by claiming “Watson

was our brand name for the whole field of artificial intelligence,” July 28 Trial Tr. at 32:15-33:19, that simply was not true as “Watson” circa 2010 referred only to DeepQA; the Watson brand moniker did not begin until January 2013. FOF ¶ 216. IBM also promised Nuance a single DeepQA core that would be the center of IBM’s product offerings, with all Updates added to the core and provided to Nuance. *See supra* 3-5; July 28 Trial Tr. at 100:25-102:18 (Rob High testimony) (“The resulting cleaned version of DeepQA was brought in and used originally with the intention of that being the core of all the product offerings that we were going to create – going to create in the Watson Division”). In addition, IBM repeatedly advised Nuance that IBM would be significantly developing DeepQA beyond the *Jeopardy!* challenge. *See supra* 3-6. Indeed, at the eleventh-hour meeting the night before the SLA was executed, as Paul Ricci relayed in a contemporaneous note to Nuance’s board, Dr. Kelly “made very strong commitments concerning resource dedication and rapid focus on achieving a demonstrable product in healthcare.” PX024 at PX024.001. These commitments convinced Nuance to enter into the SLA. FOF ¶¶ 54, 89.

*Second*, when IBM’s first SLA draft did not include Updates, Nuance insisted on Updates from all of IBM. FOF at ¶¶ 55-62; Trial Tr. at 178:24-179:6 (Helgi Bloom testimony) (“Q. Do you, as you sit here now, have a specific recollection, like a videotape, of either you or Jeanne saying, our expectation is that updates will come from all of IBM, not only IBM Research Group? A. Yes, I said that. Yes, Jeanne said that.”). No one at IBM ever told Nuance that it would only be entitled to Updates developed by IBM Research or that Nuance’s license was insufficient to get Updates from outside of IBM Research. FOF ¶ 75. Nuance sought Updates from all of IBM both because the technology was early-stage and needed substantial work and because it was unknown which IBM groups would ultimately work on the code. *Id.* at ¶¶ 63-64. IBM cannot contradict anything Nuance said about the SLA negotiations because its 30(b)(6) witness (Kevin Reardon)

on the topic had no recollection about them. *Id.* at ¶ 76; *A & E Prods. Grp., L.P. v. Mainettie USA Inc.*, No. 01 Civ. 10890, 2004 WL 345841, at \*6 (S.D.N.Y. Feb. 25, 2004) (“Testimony of a Rule 30(b)(6) witness is then binding on the party that designated the witness.”). Indeed, the need for Updates was also clear to IBM – IBM’s witnesses agreed that DeepQA, as it existed in September 2010, could not be used commercially without making significant updates and modifications to the code. FOF ¶¶ 118-120. Ultimately, IBM agreed to provide Updates and included IBM’s obligation to provide Updates both in the Updates Provision and in Section 2.4. *Id.* at ¶¶ 72-73. Nuance would not have entered into the SLA without Updates from all of IBM. *Id.* at ¶ 79.

As noted above, IBM’s contention that the SLA was simply between IBM Research and Nuance and other IBM divisions could not be bound was exposed as made-up during the trial. *See* at ¶¶ 93-95, 102-105. IBM’s actual practice under the SLA similarly belies its argument that only IBM Research was bound – as both IBM’s Ken King and IBM’s expert testified, the Updates Provision included certain IBM Software Group developed files and Updates to those files were provided to Nuance. *Id.* at ¶¶ 107-108.

*Third*, Nuance specifically negotiated for an Updates provision that would cover new code and functionality for the core DeepQA system, *id.* at ¶¶ 110-112, which is inconsistent with IBM’s position that it was only required to deliver Updates to the source code in Exhibit A of the SLA. Nuance’s Jeanne McCann made clear prior to entering into the SLA that Nuance sought “to ensure that the updates/upgrades/modifications language [was] sufficiently robust to include in new components or modules for the core [DeepQA] system.” PX019 at PX019.002. IBM’s Eric Brown agreed, testifying that Nuance was entitled to new code, including new files, if they were improvements of “the functions as originally contemplated in the DeepQA system.” Trial Tr. (Eric Brown testimony) at 682:2-11. IBM’s position is not only technically unsound, it defies source

code development best practices and the term “updates” in the software industry includes new files as well as new code that improves functionality. FOF ¶¶ 113-114. Moreover, IBM’s own practice belies its after the fact interpretation of the SLA as IBM’s initial DeepQA delivery included many files that were not listed in Exhibit A, and IBM continued to deliver files that were not in Exhibit A after the initial delivery. *Id.* at ¶ 115. Accordingly, Nuance is entitled to Updates from all of IBM, including new components and code. *Id.* at ¶¶ 110-115.

Finally, IBM’s conduct after it executed the SLA is telling. Less than a year later, with Watson’s victory on *Jeopardy!* as the intervening event, IBM sent Nuance a Proposed Amendment. *Id.* at ¶ 167. The Proposed Amendment sought to revise “Licensed IBM Background Software” to limit Updates only to those developed by IBM Research. JX017. Dr. Kelly admitted the Proposed Amendment would bring no benefit to Nuance. July 28 Trial Tr. at 64:12-65:12 (John Kelly testimony). Nuance’s Paul Ricci rejected the Proposed Amendment, indicating Nuance was happy with its contract. *Id.* at 67:24-68:6; FOF ¶ 175. If the SLA already limited Nuance to IBM Research Updates, then the Proposed Amendment would have been unnecessary.

Taken together, the extrinsic evidence resolves any ambiguity in the Updates Provision in Nuance’s favor. Accordingly, the Court should declare, pursuant to 28 U.S.C. § 2201, that Nuance is entitled to all DeepQA Updates developed by IBM, including new components and code.

### III. IBM’s Multiple SLA Breaches

It is undisputed that the parties have a valid and binding contract and that Nuance fulfilled its end of the bargain. FOF ¶¶ 91-92. Further, IBM has plainly withheld Updates in breach of the SLA. *See supra* 8-11. These Updates include the “blue-washing” process to convert DeepQA into commercially acceptable code to be used in fields outside of *Jeopardy!*. FOF ¶¶ 130-138. They also include products developed from that version of the DeepQA code, including Watson Discovery Advisor, Watson Engagement Advisor, Watson for Oncology, and Natural Language

Classifier, which Nuance's expert concluded shared a significant amount of code with DeepQA. *See supra* 8-9; *see also* FOF ¶¶ 138, 224-282. IBM's argument, that some products contain domain dependent Updates and therefore Nuance is not entitled to them misses the point. It is simply not possible for DeepQA Updates to be extracted from these products as they would cease to function. FOF ¶¶ 225, 272. Further, as discussed at trial, domain dependent components often update and improve upon the domain independent core. *Id.* at ¶ 227. Accordingly, Nuance should receive all source code for the blue-washed DeepQA, Watson Discovery Advisor, Watson Engagement Advisor, Watson for Oncology, and Natural Language Classifier. In addition, as discussed *supra* 11, IBM withheld domain independent Updates created by IBM Research in the NONSLAC component and Nuance is therefore also entitled to that component. FOF ¶¶ 177-199.

Similarly, IBM breached the SLA when it chose to develop and improve DeepQA's functionality outside of the core and into separate APIs and not provide those to Nuance. *Id.* at ¶¶ 42, 48-49, 51-52, 110-115, 283-326. These APIs include Document Conversion, Discovery, Natural Language Understanding, Retrieve and Rank, Tone Analyzer, Watson Explorer, and Watson Knowledge Studio, all of which IBM has publicly admitted evolved from DeepQA, and which Nuance's expert concluded improve upon DeepQA's functionality. *Id.* at ¶¶ 283-326.

#### **IV. Because of IBM's Breach, Nuance Was Unable to Commercialize DeepQA**

Despite IBM's pre-SLA representations, and in violation of its obligations under the SLA, IBM delivered only limited, low value updates to Nuance. FOF ¶ 338. As a result, and despite Nuance investing a significant amount of money in its internal DeepQA program, Nuance was unable to commercialize the code and therefore realized no return on its \$25 million investment. *Id.* at ¶¶ 340-342. Indeed, Nuance's harm is greater than \$25 million because, since IBM reneged on its promises and blocked Nuance from following the evolution of DeepQA, Nuance lost its competitive advantage in the market and the ability to monetize its investment. *Id.* at ¶ 343.

## V. Nuance's Suit Is Timely

Under the SLA, “[n]either party may bring an action . . . more than two years after the cause of action has accrued and ***the party obtained knowledge thereof.***” JX001 at JX001.18 (emphasis added). As the Court held in its summary judgment decision, “suspicions, even strong ones,” are not the same as obtaining knowledge. *Nuance Commc’ns*, 2019 WL 2006180, at \*7. Nuance only first learned of IBM’s breach in 2015, when IBM’s Bill LaFontaine relayed to Jeanne McCann that Nuance was not receiving all DeepQA Updates. FOF ¶¶ 219-220. As detailed above, *supra* 11-12, IBM repeatedly assured Nuance – including in contemporaneous documents – that it was receiving all Updates, and Nuance had no ability to confirm otherwise. Tellingly, there is not a single document indicating that, prior to 2015, IBM told Nuance that it was withholding Updates.

IBM’s alleged evidence of prior disclosure comes solely from witnesses who lack credibility – their undocumented assertions that they relayed to Nuance that IBM was withholding DeepQA Updates should carry no weight. For example, Dr. John Kelly attempted to dispute that Nuance first learned of IBM’s breach in 2015 by making the incredible assertion that Nuance’s Paul Ricci stated he “made a mistake” in signing the SLA. Declaration of John Kelly ¶¶ 25-26. Not only are there no documents to support Dr. Kelly’s assertion, his story also makes no sense as it is based on an alleged express SLA provision that he contends allows IBM to “move people across the border” between IBM Research and IBM Software Group. July 28 Trial Tr. at 87:7-88:19 (John Kelly testimony). No such provision exists. *See* JX001. IBM’s other witnesses should similarly be dismissed based on their trial admissions. FOF ¶¶ 348, 350. IBM’s David McQueeney alleged that, based on a July or August 2011 conversation, Nuance’s Jeanne McCann “understood that Nuance was only entitled to DeepQA work done by IBM Research,” yet he admitted under cross-examination that Ms. McCann asserted rights to updates from *all* of IBM three months later in November 2011, and he had no recollection of *ever* reaching out to Ms.

McCann after November 2011 to clarify IBM’s obligations. *Id.* at ¶ 348. Mr. McQueeney also alleged that, at a September 2011 meeting with Nuance, IBM’s Manoj Saxena “explicitly reiterated IBM’s [view] that Nuance was not entitled to any Modifications developed by [Software Group],” yet he admits his own contemporaneous summary of the meeting makes no mention of such assertion. *Id.* IBM’s Ken King also alleged he had conversations with Nuance where he relayed that IBM Software was not sharing its work on DeepQA, yet at trial he conceded that not only could he not recall or identify any such specific conversations, he was not even aware that IBM Software Group had its own version of the DeepQA code until well after this lawsuit was filed. *Id.* at ¶ 350. Accordingly, there is no support in the record for IBM’s litigation assertions that Nuance had knowledge of IBM’s breach more than two years prior to filing suit.

Further, as the Updates obligation is continuing, IBM’s defense is irrelevant since the products at issue were released less than two years before Nuance filed suit. *Id.* at ¶ 407; *Guilbert v. Gardner*, 480 F.3d 140, 150 (2d Cir. 2007) (Where contract requires “continuing performance over a period of time, each successive breach may begin the . . . limitations [period] anew.”).

## **VI. Nuance is Entitled to Specific Performance, Extension of the SLA Term, and the Appointment of a Special Master**

Nuance seeks specific performance of IBM’s obligations under SLA Sections 1.1 and 2.1. See *Versatile Housewares & Gardening Sys., Inc. v. Thill Logistics, Inc.*, 819 F. Supp. 2d 230, 241 (S.D.N.Y. 2011) (noting specific performance “will be ordered when [money] damages would not be an ‘adequate remedy’ . . . as in cases in which damages will be difficult to prove with certainty, damages would not allow the procurement of substitute performance, or the contract involves unique goods or services”). Nuance therefore requests an order directing IBM to deliver all DeepQA Updates. Further, because IBM failed to provide DeepQA Updates, a material obligation under the SLA, Nuance lost the opportunity to commercialize DeepQA for several years.

Accordingly, Nuance requests that the Court extend IBM's obligations under SLA Sections 1.1 and 2.1 through September 30, 2030. *See Edelman*, 42 A.D.3d at 322 (extending time to perform a material obligation for the length of time that offending party was in violation of the contract).

Finally, Nuance respectfully requests that the Court appoint a special master to review IBM's source code and product lines and determine whether additional, as-yet unidentified DeepQA Updates are owed to Nuance. *See C.D.S., Inc. v. Bradley Zetler, CDS, LLC*, 190 F. Supp. 3d 375, 378 (S.D.N.Y. 2016), *aff'd*, 691 F. App'x 33 (2d Cir. 2017) (appointing a special master to "monitor compliance" with "relief ordered by the Court"). IBM's lack of cooperation in the discovery process makes clear that the identified products may be just the tip of the iceberg. FOF ¶¶ 327-337. For example, IBM only produced Watson Discovery Advisor, which IBM describes as "a direct descendant of the Watson *Jeopardy!* system," *after* Nuance questioned why it was not produced. *Id.* at ¶ 328. Further, IBM refused to answer interrogatories regarding other question answering products. *Id.* at ¶ 329. Moreover, even now, IBM witnesses and public documents identify additional products that use DeepQA or improve DeepQA's functionality. *Id.* at ¶¶ 330-337.<sup>6</sup> Given IBM's lack of candor during discovery, a special master is warranted to ensure Nuance receives all DeepQA Updates to which it is entitled. *See Yonkers*, 29 F.3d at 44.

### **CONCLUSION**

For the foregoing reasons, Nuance respectfully requests that the Court enter judgment in its favor determining that Nuance is entitled to all Updates developed throughout IBM, including new components and code, appointing a special master to review IBM's source code, and ordering IBM to deliver all Updates developed through September 30, 2030.

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<sup>6</sup> IBM continues to release products that appear based on DeepQA's functionality, including ESPN Fantasy Insights With Watson, Watson Candidate Assistant, Watson Career Coach and Watson Talent Frameworks. *See* FOF ¶ 337.

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